

Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A molded article made from a composition comprising:

at least one thermoplastic elastomer having at least one elastomeric phase and at least one thermoplastic phase, wherein the at least one thermoplastic phase consisting essentially of at least one propylene-based polymer and the at least one elastomer phase comprises a styrenic copolymer rubber phase or an at least partially crosslinked ethylene-propylene-diene rubber phase; and

at least one nucleating agent for formation of nucleation sites for crystal growth within the thermoplastic phase of the thermoplastic elastomer, wherein the nucleating agent ~~comprises~~ is selected from the group consisting of sodium benzoate, a sorbitol derivative, an organic phosphate ester salt, an acrylic acid-grafted polypropylene, a norbornane carboxylic acid salt, a nucleating talc, or and combinations thereof, and

wherein the molded article has been molded from the thermoplastic elastomer and the nucleating agent has enhanced the rate of crystal formation in the thermoplastic phase of the thermoplastic elastomer during cooling of the thermoplastic elastomer to achieve a solid crystal structure for the molded article in a shorter time as compared to melt-processing of the thermoplastic elastomer into the molded article without the nucleating agent.

2. (Currently Amended) The molded article of claim 1, wherein the at least one nucleation agent is dispersed within the at least one thermoplastic phase, and wherein the nucleation agent is selected from the group consisting of a combination of the acrylic acid-grafted polypropylene, sodium benzoate, and a sorbitol derivative and a combination of the nucleating talc, the norbornane carboxylic acid salt, sodium benzoate and a sorbitol derivative.

3. (Previously Presented) The molded article of claim 1, wherein the thermoplastic elastomer comprises at least two chemically distinct thermoplastic phases.

4. (Currently Amended) The molded article of claim 3, wherein the thermoplastic phase comprises a continuous phase and the elastomer phase comprises a discontinuous phase dispersed in the continuous thermoplastic-elastomer phase.

5. (Previously Presented) The molded article of claim 4, wherein the composition comprises about 0.005% to about 5% by weight nucleating agent based on total weight of the thermoplastic phase in the thermoplastic elastomer.

6. (Previously Presented) The molded article of claim 5, wherein the thermoplastic elastomer comprises at least one thermoplastic phase of polypropylene; and wherein the thermoplastic elastomer comprises styrene-butadiene (SB) rubber, styrene-ethylene-butadiene-styrene (SEBS) rubber, styrene-ethylene-propylene-styrene (SEPS) rubber, styrene-isoprene-styrene (SIS) rubber, styrene-ethylene-ethylene-propylene-styrene (SEEPS) rubber, styrene propylene-styrene (SPS) rubber, hydrogenated versions of the foregoing, or combinations thereof.

7. (Previously Presented) The molded article of claim 6, wherein the article has enhanced transparency as compared to an article formed from a composition without the nucleating agent.

8. (Currently Amended) A method of using a nucleating agent to enhance rate of formation of a solid crystal structure in a thermoplastic elastomer being molded into an article, comprising the steps of:

adding a nucleating agent, selected from the group consisting of an acrylic acid-grafted polypropylene, a norbornane carboxylic acid salt, a nucleating talc, and

combinations thereof, to a thermoplastic phase of a thermoplastic elastomer to form the thermoplastic elastomer composition referred to in claim 1;

molding the thermoplastic elastomer composition into the article;

permitting the thermoplastic elastomer composition in the article to cool, wherein the nucleating agent stimulates formation of a solid crystal structure within the thermoplastic phase of the thermoplastic elastomer composition more rapidly than if the nucleating agent were not present.

9. (Currently Amended) The method of claim 8, wherein the nucleation agent is dispersed within the thermoplastic phase, and wherein the nucleation agent is selected from the group consisting of a combination of the acrylic acid-grafted polypropylene, sodium benzoate, and a sorbitol derivative and a combination of the nucleating talc, the norbornane carboxylic acid salt, sodium benzoate and a sorbitol derivative.

10. (Previously Presented) The method of claim 8, wherein the thermoplastic elastomer comprises at least two chemically distinct thermoplastic phases.

11. (Currently Amended) The method of claim 8, wherein the thermoplastic phase comprises a continuous phase and the elastomer phase comprises a discontinuous phase dispersed in the continuous thermoplastic elastomer phase.

12. (Previously Presented) The method of claim 8, wherein the composition comprises about 0.005% to about 5% by weight nucleating agent based on total weight of the thermoplastic phase in the thermoplastic elastomer.

13. (Previously Presented) The method of claim 8, wherein the thermoplastic elastomer comprises at least one thermoplastic phase of polypropylene; and wherein the thermoplastic elastomer comprises styrene-butadiene (SB) rubber,

styrene-ethylene-butadiene-styrene (SEBS) rubber, styrene-ethylene-propylene-styrene (SEPS) rubber, styrene-isoprene-styrene (SIS) rubber, styrene-ethylene-ethylene-propylene-styrene (SEEPS) rubber, styrene propylene-styrene (SPS) rubber, hydrogenated versions of the foregoing, or combinations thereof.

14. (Previously Presented) The method of claim 8, wherein the article has enhanced transparency as compared to an article formed from a composition without the nucleating agent.